REMARKS

In accordance with the foregoing, the drawings are amended. Claims 1, 3-12 and 18-29 are now pending and under consideration. No new matter is included in this amendment. The Examiner's rejections are traversed below.

ENTRY OF AMENDMENT UNDER 37 C.F.R. § 1.116

Applicant requests entry of this Rule 116 Response because the amendment of drawings should not entail any further search by the Examiner since no new features are being added or no new issues are being raised.

ITEM 2: OBJECTION TO THE DRAWINGS

Item 2 of the Action objects to the drawings. The Examiner contends that figures 3A and 3B should be designated by a legend such as -- PRIOR ART -- since only that which is old is illustrated

In light of this objection, replacement figures are submitted herewith as suggested by the Examiner. FIGS. 3A and 3B are labeled "BACKGROUND" and replace previous FIGS. 3A and 3B. Approval of these changes to the drawings and withdrawal of the objection is requested.

ITEM 3: REJECTION OF CLAIMS 6-8, 12 AND 28 UNDER 35 U.S.C. §112, FIRST PARAGRAPH

The Examiner rejects claims 6-8, 12, and 28 under 35 U.S.C. §112, first paragraph (Action at pages 2-3). The Examiner incorrectly contends that these features are new matter since:

> (c)laims 6-8,12 and 28 recite the power level of first pulse/last pulse/multi-pulse depending on a size of the mark which is not show(n) in the original disclosure. As seen in figures 6A, 6B and the specification, page 9, table 1, and page 10, paragraph [0039], states that " FIGS. 6A and 6B are waveforms of multiple pulse trains when a recording control method according to the present invention is used. Referring to FIG. 6A, in a first multiple pulse train, afirstpulse, a multi-pulse, and a last pulse have different power levels depending on the size of a current mark as set forth in a fifth case of Table 1. In a second multiple pulse train, an adaptive recording control method is applied to first and last pulses as set forth in a sixth case of Table 1. In a third multiple train, the power level of a last pulse is set depending on the s i z e of a current m a r k . ". Thus, the power level of first pulse alone, a multi-pulse alone or last pulse alone are not depend(ent) on the size of the mark as claimed. (Emphasis is Examiner's).

Applicant points out that claims 6-8,12 and 28 do not recite the power level of first pulse alone, a multi-pulse alone or last pulse alone, as claimed, as the Examiner seems to incorrectly interpret. Claim 6 recites a method "further comprising further adapting the power level of the first pulse depending on a size of the mark." Claim 7 recites a method "further comprising: adapting the power level of the multi-pulse depending on the size of the mark." Claim 8 recites a

method "further comprising: further adapting the power level of the first pulse depending on the size of a current mark." Claim 12 recites a method "further comprising: adapting the power level of the multi-pulse depending on the size of the mark." Claim 28 recites a method "further comprising: adapting the peak power level of the multi-pulse depending on a size of the mark."

That is, each of the claims recites a method "comprising" adapting the power level of a first pulse or a second pulse or last pulse. As set forth in MPEP 2111.03 entitled Transitional Phrases [R-2] - 2100 Patentability

> (the) transitional term "comprising", . . . is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., >*Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003) ("The transition 'comprising' in a method claim indicates that the claim is open-ended and allows for additional steps.");< *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501, 42 USPQ2d 1608, 1613 (Fed. Cir. 1997) ("Comprising" is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim)

Features of claims 6-8,12 and 28 are discussed, for example, in Table 1 that discusses in part:

Type of adaptive power control
Changed depending on combination of previous space and current mark by applying adaptive power only to first pulse
Changed depending on combination of current mark and next space by applying adaptive power only to last pulse
Changed depending on size of current mark by applying adaptive power only to first and last pulses
Changed depending on size of current mark by applying adaptive power to first, last, and multi pulses
Changed by applying different power to first, last and multi pulses instead of applying adaptive power control
Changed depending on combination of previous space and current mark by applying adaptive power control to first pulse and adjusted depending on combination of current mark and next space by applying adaptive power control to last pulse. Three different adaptive power levels provided.
Changed depending on size of current mark by applying adaptive power control to last pulse.
Consisting of first, last and multi pulses of different adaptive power levels. Changed depending on size of current mark by applying adaptive power level to entire write power.

Summary

Applicant submits that claims 6-8, 12, and 28 do not recite new matter, and request the rejection be withdrawn.

ITEM 7: REJECTION OF CLAIMS 1, 3-12, 24-25, AND 27-28 UNDER 35 U.S.C. §102(b) AS BEING ANTICIPATED BY APPLICANT'S PRIOR ART (FIGS. 1A, 1B, 2, 3A, 3B AND 7-9) (APA)

The Examiner rejects independent claims 1, 24, and 27 (and dependent claims 3-12, 25, and 28) under 35 U.S.C. 102(b) as being anticipated by APA. (Action at pages 4-9).

The Examiner incorrectly contends, using the support for the rejection of claim 1 as an example, that a method comprising "forming a mark using a multiple pulse train comprising a first pulse, a multi-pulse having a peak power level and a last pulse" is discussed by "Fig. 3A, first pulse at beginning of pulse chain, multi-pulse in the middle of pulse chain and last pulse at the end of pulse chain" and "adapting a power level of the first pulse relative to the peak power level of the multi-pulse depending on a correlation between the mark and a previous space" is discussed by "Fig. 3A, the changed depending on combination of previous space and current mark" and "adapting a power level of the last pulse relative to the peak power level of the multi-pulse depending on a correlation between the mark and a next space" is discussed by "Fig. 3A, the changed depending on combination of current mark and next space." (Action at pages 4-5).

Applicant points out that FIG. 3A discusses:

> a first multiple pulse train, the power level of a first pulse is adjusted according to a combination of a previous space and a current mark. In a second multiple pulse train, the power level of a last pulse is adjusted depending on a correlation between a current mark and a next space. In a third multiple pulse train, the power levels of first and last pulses are adjusted depending on the size of a current mark regardless of a correlation between a mark and a space.

(Emphasis added, see, paragraph [0025]). That is, FIG. 3A discusses three multiple pulse trains.

As seen from a comparison of FIG. 3 A and FIG. 6, FIG. 3A does not discuss the method recited by claim 1 "forming a mark using a multiple pulse train comprising a first pulse, a multi-pulse having a peak power level, and a last pulse; adapting a power level of the first pulse relative to the peak power level of the multi-pulse depending on a correlation between the mark and a previous space; adapting a power level of the last pulse relative to the peak power level of the multi-pulse depending on a correlation between the mark and a next space."

FIG. 3A also does not discuss a method, as recited by independent claim 24 including "providing a different reference power level to each multi-pulse train depending on the energy or density of a non-return-to-zero inverted (NRZI) signal detecting a correlation between a current mark and a space between successive marks." (Emphasis added).

FIG 3A also does not discuss as recited by independent claim 27 recites "adapting a power level of at least one of the first pulse and the last pulse relative to a peak power level of

the multi-pulse depending on a correlation between the mark and one of a previous space and a next space."

That is, the Examiner's contentions are based on using a combination of multi-trains and do not discuss the features recited.

Summary

Since features recited by claims 1, 3-12, 24-25, and 27-28 are not discussed by the art relied on by the Examiner, the rejection should be withdrawn and claims 1, 3-12, 24-25, and 27-28 allowed.

ITEM 7: REJECTION OF CLAIMS 18-20 AND 26 UNDER 35 U.S.C. §102(b) AS BEING ANTICIPATED BY (APA)

The Examiner rejects independent claims 18 (and dependent claims 19-20 and 26) under 35 U.S.C. §102(b) as being anticipated by APA. (Action at pages 4-9).

Independent claim 18 recites a method of controlling recording a signal on an optical disc, the method comprising "providing a multiple pulse train for recording a mark on the optical disc, the multiple pulse train comprising a first pulse, a multi-pulse having a reference power level, and a last pulse; and controlling a power level of said last pulse independent of a power level of said first pulse."

In support of the rejection, the Examiner incorrectly cites the specification paragraph [0025] as prior art. (Action at page 6).

Applicant submits that paragraph [0025] is not prior art, and is not correctly relied on by the Examiner in support of the rejection.

Rather, paragraph [0025] in the section entitled "SUMMARY OF INVENTION" discusses "The above and other objects of the present invention may also be achieved by providing an . . ."

Summary

Since features recited by claims 18-20 are not discussed by prior art, the rejection should be withdrawn and claims 18-20 allowed.

ITEM 9: REJECTION OF CLAIMS 21-23 ARE REJECTED UNDER 35 U.S.C. 103(a) AS BEING UNPATENTABLE OVER APA

The Examiner rejects claims 21-23 under 35 U.S.C. §103(a) as being unpatentable over APA. The Examiner contends that APA does not discuss

> that multi-pulse reference power level is greater than first pulse power level and less than last pulse power level. It would have been obvious . . . to adjust the power level of multi-pulse to be greater/lower first or last pulse

In other words, the Examiner is contending that given the prior art, one of ordinary skill given the disclosure of the present invention would have been come up with the present invention.

Applicant submits that the Examiner is incorrectly modifying the APA. As provided in MPEP §2144. 04:

> The mere fact that a worker in the art could rearrange the parts of the reference device . . . is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation . . . without the benefit of appellant's specification, to make the necessary changes in the reference device.

(Emphasis added).

Summary

Since *prima facie* obviousness is not established, the rejection should be withdrawn and claims 21-23 allowed.

ITEM 11: REJECTION OF CLAIM 18 UNDER 35 U.S.C. 102(e) AS BEING ANTICIPATED BY KANDO ET AL (U.S.P. 6,678,228)

The Examiner rejects claims 18 under 35 U.S.C. 102(e) as being anticipated by Kando. (Action at page 11).

The Examiner contends that Kando teaches "Controlling the power level of last pulse independent with first pulse (column 6, line 48-67)."

Applicant points out that independent claim 18 recites "controlling a power level of said last pulse independent of a power level of said first pulse" (Emphasis added) and not the phrase "independent with," as the Examiner contends.

Rather, Kando merely discusses.

> (a) sufficient recording compatibility can be maintained by setting the following target values of the average power of the respective pulses. Specifically, the average power level of the first pulse is set to the designated peak power value .+-.5%, the average power level of the middle pulse chain is set to the designated middle power level .+-.5% when the designated middle power is defined as 0.5.times.(designated peak power value+designated value of bias power 3), the average power level of the last pulse is set to the designated peak power value .+-.5%, and the average power level of the negative pulse is set to the designated value of bias power 2.+-.5%.

(See, col. 6, lines 47-60).

That is, Kando does not discuss controlling a power level of said last pulse "independent of a power level of said first pulse," as recited by claim 18.

Summary

Since features recited by claim 18 are not discussed by the art relied on by the Examiner, the

rejection should be withdrawn and claim 18 allowed.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: August 23, 2005

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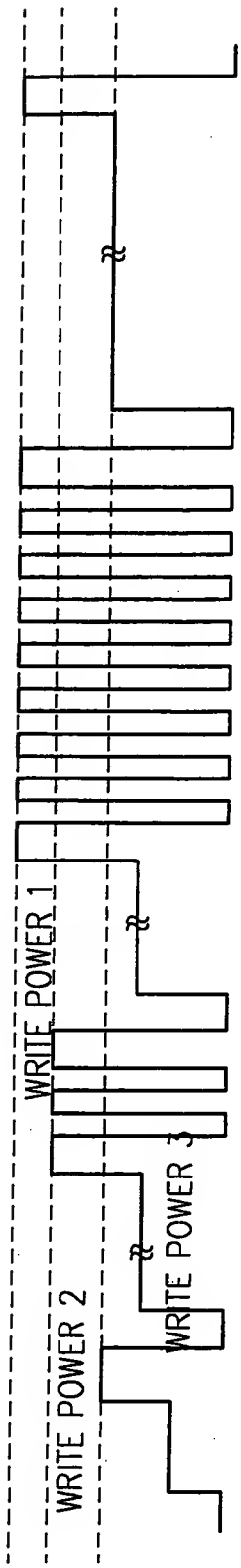
ANNOTATED SHEET

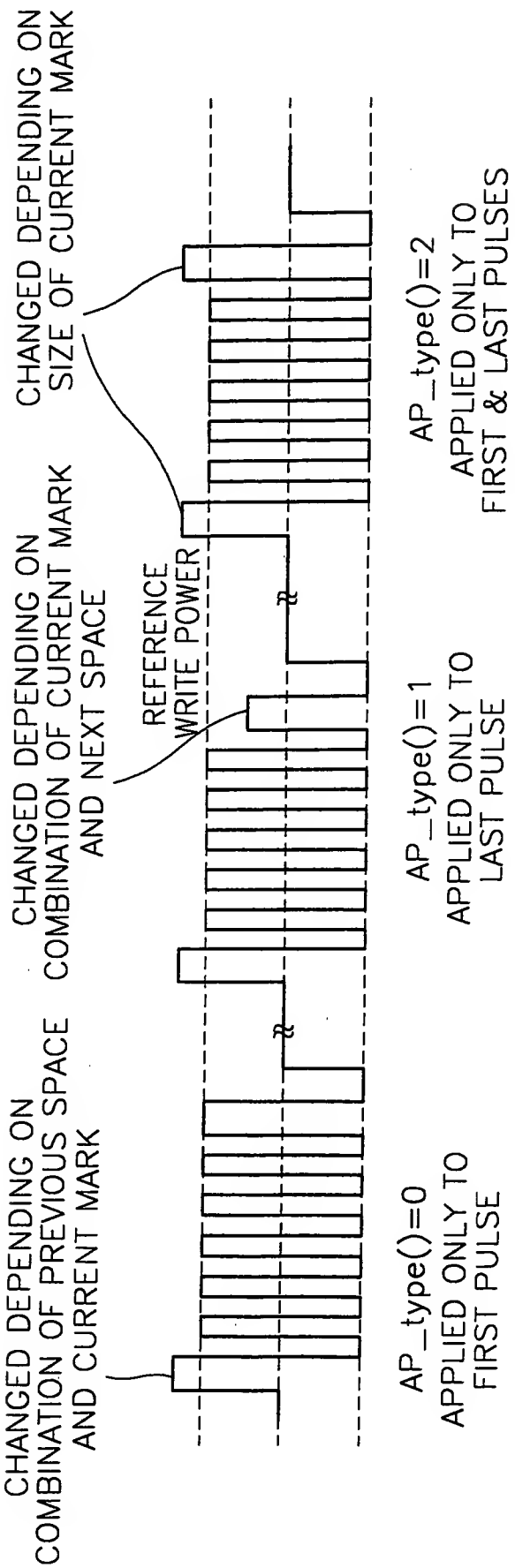
FIG. 3B (BACKGROUND)



AP_type()=3
APPLY ADAPTIVE POWER LEVEL TO WRITE PULSE
DEPENDING ON SIZE OF CURRENT MARK

ANNOTATED SHEET

FIG. 3A (BACKGROUND)



IN THE DRAWINGS:

Item 2 of the outstanding Office Action objects to the drawings. In light of these objections, replacement figures are submitted herewith. FIGS. 3A and 3B are labeled "BACKGROUND" and replace previous FIGS. 3A and 3B. Approval of these changes to the drawings is respectfully requested.